



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200
Fax 613 632-5246

Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
P0041817	MEC002-VU	2	1	Net 30	M7075T6S0.375X5.000	M7075T6S0.375 X 5.000 : MATERIAL: 7075- T6/T62/T651 ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 OR MATERIAL: 7075- T6/T62/T65/ ALCLAD ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/13 OR AMS-QQ-A- 250/13 OR AMS 4048 / 4049 OR ASTM B209 receive ft				24	12/17/2018	24		S138106	Stock	12/14/2018	\$ 22.18 / ft	3		\$534.09	Melaux Castle

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
		3			M7075T6S0.375X8.000	7075-T6 Sheet .375" Thick Plate X 8" Wide : MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 OR MATERIAL: 7075-T6/T62/T65/ ALCLAD ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/13 OR AMS-QQ-A- 250/13 OR AMS 4048 / 4049 OR ASTM B209 receive ft				12		12		S138111	Stock	12/14/2018	\$ 35.20 / ft	3		\$423.81	Metaux Castle
		4			M7075T6S1.750X3.000	7075-T6 Sheet 1.750" X 3.000" MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 receive ft						12		S138114	Stock	12/14/2018	\$ 47.20 / ft	3		\$568.29	Metaux Castle
Total:										48		48								\$1,526.19	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO041817

Supplier: MEC002-VU
Metaux Castle
P.O. Box 4090 Stn A
Toronto
ON
M5W OE9 Canada

PO No: PO041817

PO Date: 11/22/18

Due Date: 12/17/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED
NOV 23 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		M7075T6S2.000X7.000		7075-T6S Sheet 2" Thick Plate X 7" Wide (Order In Billets - 13.375") : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	-	12/17/18	22.3 ft	0 ft	22 ft	\$104.03587/ft	\$2,320.00

Line Item Note 20 pcs cut at 13.375" = 22.30 ft



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041817**

Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
2 AK		M7075T6S0.375X5.000		M7075T6S0.375 X 5.000 : MATERIAL: 7075- T6/T62/T651 ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 OR MATERIAL: 7075- T6/T62/T65/ ALCLAD ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/13 OR AMS-QQ-A- 250/13 OR AMS 4048 / 4049 OR ASTM B209 receive ft	Firmed	-	12/17/18	24 ft ✓ 24.08	0 ft	24 ft	\$22.18/ft AK 18/12/17	\$532.32



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO041817

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
3 ✓ AT		M7075T6S0.375X8.000		7075-T6S Sheet .375" Thick Plate X 8" Wide : MATERIAL: 7075- T6/T62/T651 ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 OR MATERIAL: 7075- T6/T62/T65/ ALCLAD ALUMINUM SHEET OR PLATE SPECIFICATION: QQ-A-250/13 OR AMS-QQ-A- 250/13 OR AMS 4048 / 4049 OR ASTM B209	Firmed	-	12/17/18	12 ft ✓	0 ft 12.04	12 ft AT 18/12/17	\$35.20/ft	\$422.40
4 ✓ AT		M7075T6S1.750X3.000		receive ft 7075-T6 Sheet 1.750" X 3.000" : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A- 250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	-	12/17/18	12 ft ✓	0 ft 12.04	12 ft AT 18/12/17	\$47.20/ft	\$566.40

Grand Total: \$3,841.12



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO041817

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program
A049 supplier awareness

A handwritten signature in black ink, appearing to be "C. Lavoie", is written over the right side of the Order Notes section.

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/22/18 2:44 PM dart.lavoie.chantal

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE


Page 1 of 1

Shipment No:3779153

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN	Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
Date Shipped 13-DEC-18	F.O.B. ORIGIN	Freight Terms Prepaid	Carrier MANITOULIN	BOL No 3779153-2

Shipment Details

Final Destination Branch - TOR

Order No 5328080	Line No 3	Item No 750488.MO	Description 1.7500.PL.7075.T651.ALUMINUM.USH.48.5000.144.5000 CUT 2SIDED TO 3 IN (+ .1250/- .0000 IN) X 144.5 IN () - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12		
Purchase Order No 41817	Part Number		Ordered Qty 1.00 PCS	Invoice Qty 1.00 PCS	
Details ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No. 122458542	Mill/Source KAISER ALUMINUM	Heat Number  278469B2	Mech Id	PCS 1	Width (IN)
					Length (IN)
					Shipped Qty(LBS) 78.5479

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material returned to the customer without inspection of the material cut by the customer will not be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

DEC 13 2018

SUE KALOOS

Date Printed: 13-DEC-2018 02:18:22 PM

SHIP TO: A M CASTLE & CO 14001 ORANGE AVE P.O. BOX 1402 PARAMOUNT, CA 90723
SOLD TO: AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523

KAISER ALUMINUM

Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108

15000 E Euclid, Spokane Valley WA 99216

Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4536956

CUSTOMER PO NUMBER: 474000-1	WORK PACKAGE:	CUSTOMER PART NUMBER: 750488	SHIP RUN/LOAD: 104450/25	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1265308-1	SHIP DATE: 12-NOV-2018	ALLOY: 7075	CLAD: BARE	TEMPER: T651	PRODUCT DESCRIPTION: KaiserSelect Plate
WEIGHT SHIPPED: 6298 LB (2856.75 KG)	QUANTITY: 5 PCS EST.	TRUCK B/L #: 2077246	GAUGE: 1.7500 IN (44.4500 MM)	DIAMETER/WIDTH: 48.500 IN (1231.9 MM)	LENGTH: 144.500 IN (3670.3 MM)

MHU 2257249: LOT 278469B2: 2 pieces;

MHU 2277317: LOT 716826B3: 3 pieces;

Certified Specifications

AMS 4045/RevL
ASTM B 209/Rev14
BSS 7055/RevB
DPS 4.713/RevAK
PS 21211/RevP

AMS-QQ-A-250/12/RevA
ASTM B 594/Rev13
CMMP 025/RevV
GAMPS 9101/RevB/AmdSCN1

AMS-STD-2154/RevC
BAC 5439/RevJ
CSTI 006/RevE
GSS16100/RevG/Amd1

Test Code: 1512

Lot: **278469B2** Cast 690

Drop 50

Test Results

Ingot 2

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	83.8 : 84.0 (578 : 579)	74.9 : 75.4 (516 : 520)	13.4 : 13.5

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.07	0.17	1.5	0.03	2.5	0.20	5.9	0.02	0.01	0.01	TOT 0.04
Lot: 716826B3	Cast 713	Drop 11	Ingot 4	Parent Lot: 280336B9	Melted in USA						

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	81.5 : 82.1 (562 : 566)	72.5 : 72.6 (500 : 501)	12.0 : 13.1

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.19	1.4	0.04	2.4	0.20	5.6	0.03	0.01	0.01	TOT 0.03





CERTIFIED TEST REPORT

Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108

15000 E Euclid, Spokane Valley WA 99216

Phone: (800) 367-2586

Serial Number

4536956

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-15403A R 9

TEST NOTES

Metal represented by this test report was 100% Type I (immersion) ultrasonically tested from one side with 3mm dead zones top and bottom and meets the Class A and Class B requirements of all specifications referenced on this test report. No surface marking of sonic indications is performed.

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

* has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.

All test equipment and measuring devices are calibrated and certified in accordance with applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.

* was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.

* has been thermally processed in compliance with AMS 2772, where applicable.

* is mercury free, within the limits of detection of ASTM E1215 (< 1ppm).

* is in compliance with RoHS 2, European Union Directive 2011/65/EU.

* is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.

* is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.

* is free of weld repair.

* meets the reporting requirements of EN10204, Type 3.1.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

Michael Peske, PT Lab Process Engineer

SPECIFICATION CONTROL DRAWING

A PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE

SPECIFICATION:
QQ-A-250/12 OR AMS-QQ-A-250/12
OR AMS 4045
OR ASTM B209

OR

B PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE

SPECIFICATION:
QQ-A-250/13 OR AMS-QQ-A-250/13
OR AMS 4048 / 4049
OR ASTM B209

A PART NUMBER: M7075T6S | TTT | X | W | WWW |
| THK | | WIDTH |

B WHERE "TTT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M7075T6S.063
EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500

A PREFERRED SIZE: .TTT BY 4FT BY 10FT FOR SHEET

RELEASED
2017 JUN 19 4
ECN 17-574

B	ADD: REF TO PLATE: 7075-T651 TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CARB-149)	CP	17.05.05
A	NEW ISSUE	RF	10.11.08
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	CP		
CHECKED	ML		
MFG. APPR.	LL		
APPROVED	WM		
DE APPR.	DS		
DATE	17.05.05		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M7075T6S			
REV. B SHEET 1 OF 1			
SCALE			
7075-T6 SHEET/PLATE SPEC NTS			
COPYRIGHT © 2018 BY DART AEROSPACE LTD			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7075T651.750x3.000

PO / BATCH NO.: P0041817/5138114

DATE: 18/12/17

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 1.750"

QUANTITY RECEIVED: 12.04 Lr

THICKNESS RECEIVED: 1.750"

QUANTITY INSPECTED: 12.04 Lr

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	N	<u>AMS 40-A-250/12</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	<u>LM: 2784482</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 61</u> DATE: <u>18/12/17</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE


Page 1 of 1

Shipment No:3779153

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN	Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
Date Shipped 13-DEC-18	F.O.B. ORIGIN	Freight Terms Prepaid	Carrier MANITOULIN	BOL No 3779153-2

Shipment Details	Final Destination Branch - TOR
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Order No 5328080	Line No 2	Item No 750067.MO	Description 0.3750.PL.7075.T651.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 8 IN (+ .1250/- .0000 IN) X 144.5 IN () - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12
Purchase Order No 41817	Part Number	Ordered Qty 1.00 PCS	Invoice Qty 1.00 PCS
Details ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS			

Delivery No. 122458542	Mill/Source KAISER ALUMINUM	Heat Number  28494789	Mech Id	PCS 1	Width (IN)	Length (IN)	Shipped Qty(LBS) 45.4181
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We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications for testing part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the date of shipment. Material not conforming to specifications cannot be returned for credit.	
Reviewed by Authorized Castle Metals Representative:	SUE KALOUS
	Date: DEC 13 2018 Name:

SHIP TO: A M CASTLE & CO 14001 ORANGE AVE P.O. BOX 1402 PARAMOUNT, CA 90723
SOLD TO: AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523

Kaiser ALUMINUM

Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108

15000 E Euclid, Spokane Valley WA 99216

Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4528433

CUSTOMER PO NUMBER: 470854-1	WORK PACKAGE:	CUSTOMER PART NUMBER: 750067	SHIP RUN/LOAD: 1041 13/8	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1263285-1	SHIP DATE: 16-SEP-2018	ALLOY: 7075	CLAD: BARE	TEMPER: T651
PRODUCT DESCRIPTION: Sawed Plate				
WEIGHT SHIPPED: 3216 LB	QUANTITY: 12 PCS EST.	TRUCK B/L #: 2076118	GAUGE: 0.3750 IN (9.5250 MM)	DIA/METER/WIDTH: 48.500 IN (1231.9 MM)
			LENGTH: 144.500 IN (3670.3 MM)	

MHU 2264264: LOT 284947B9: 12 pieces;

Certified Specifications

AMS 4045/RevL
CMMP 025/RevV

AMS-QQ-A-250/12 RevA

ASTM B 209/Rev14

Test Code: 1512

Lot: 284947B9 Cast 698

Drop 44

Test Results

Ingot 2

Melted in USA

(ASTM E8/B567)

(FN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	85.1 : 85.1 (587 : 587)	74.5 : 74.5 (514 : 514)	14.1 : 14.2

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.18	1.5	0.03	2.4	0.20	5.7	0.03	0.01	0.01	TOT 0.03

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-15409 R 4





CERTIFIED TEST REPORT

Serial Number
4528433

Trentwood Works
PO Box 15108, Spokane Valley WA 99215-5108
15000 E Euclid, Spokane Valley WA 99216
Phone: (800) 367-2586

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

- * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.
- * All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material that processes outside specification limits, mechanical properties are as shown on form and chemical composition meets specification requirements. Reported elongation values have been measured in accordance at fracture.
- * was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.
- * has been thermally processed in compliance with AMS 2772, where applicable.
- * is mercury free, within the limits of detection of ASTM E1215 (< 1ppm).
- * is in compliance with the EU, European Union Directive 2011/65/EU.
- * is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.
- * is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.
- * is free of weld repair.
- * meets the reporting requirements of EN10204, Type 3.1.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without a written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements on the certificate may be punished as a felony under federal law.

Michael Post PT Lab Process Engineer

SPECIFICATION CONTROL DRAWING

A PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE

SPECIFICATION:

QQ-A-250/12 OR AMS-QQ-A-250/12
OR AMS 4045
OR ASTM B209

OR

B PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE

SPECIFICATION:

QQ-A-250/13 OR AMS-QQ-A-250/13
OR AMS 4048 (4049)
OR ASTM B209

B PART NUMBER:

M7075T6S | TTT | X | W | WWW |
| THK | | WIDTH |

B WHERE "TTT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M7075T6S.063
EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S 500X3.500

B PREFERRED SIZE:

.TTT BY 4FT BY 10FT FOR SHEET

RELEASED

2017 JUN 19 4
ECN 17-574

B		ADD REF TO PLATE: T651 TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CARB-149)		CP	17 05 05
A		NEW ISSUE		RF	10 11 06
REV.		DESCRIPTION		BY	DATE
DESIGN	RF	DART AEROSPACE LTD			
DRAWN	CP	HAWKESBURY, ONTARIO, CANADA			
CHECKED	ML	DRAWING NO.		REV. B	
MFG. APPR.	LL	M7075T6S		SHEET 1 OF 1	
APPROVED	WM	TITLE		SCALE	
DE APPR.	DS	7075-T6 SHEET/PLATE SPEC		NTS	
DATE	17.05.05		COPYRIGHT © 2016 BY DART AEROSPACE LTD		

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7075T650.275x8.00

PO / BATCH NO.: 00041817/S138111

DATE: 18/12/17

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.375"

QUANTITY RECEIVED: 12.04

THICKNESS RECEIVED: 0.375"

QUANTITY INSPECTED: 12.04

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	AMS-QQ-A-250/12
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	Ht. 28494789
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>61</u> DATE: <u>18/12/17</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

**Castle Metals®**

A. M. Castle & Co.


**PACKING SLIP/
CERTIFICATE OF CONFORMANCE**

Page 1 of 1

Shipment No:3779153

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN	Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
Date Shipped 13-DEC-18	F.O.B. ORIGIN	Freight Terms Prepaid	Carrier MANITOU LIN	BOL No 3779153-2

Shipment Details	Final Destination Branch - TOR
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Order No 5328080	Line No 1	Item No 750067.MO	Description 0.3750.PL.7075.T651.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 5 IN (+ .1250/- .0000 IN) X 144.5 IN (+ .1250/- .0000 IN) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12	
Purchase Order No 41817	Part Number	Ordered Qty 2.00 PCS	Invoice Qty 2.00 PCS	
Details ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS				
Delivery No. 122458542	Mill/Source KAISER ALUMINUM	Heat Number  284947B9	Mech Id 2	PCS 2
			Width (IN)	Length (IN)
				Shipped Qty(LBS) 56.7726

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications furnished as part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the date of receipt of the material. Material not conforming to the above specifications cannot be returned.	
Reviewed by Authorized Castle Metals Representative:	SUE KALOUS
	DEC 13 2018
	Date: Name:

SHIP TO: A M CASTLE & CO 14001 ORANGE AVE P.O. BOX 1402 PARAMOUNT, CA 90723
SOLD TO: AM CASTLE & CO- SOLD TO 1420 KENSINGTON RD SUITE 220 OAK BROOK, IL 60523

KAISER ALUMINUM

Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108

15000 E Euclid, Spokane Valley WA 99216

Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4528433

CUSTOMER PO NUMBER: 470854-1	WORK PACKAGE:	CUSTOMER PART NUMBER: 750067	SHIP RUN/LOAD: 104393/8	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1263285-1	SHIP DATE: 16-SEP-2018	ALLOY: 7075	CLAD: BARE	TEMPER: T651
PRODUCT DESCRIPTION: Sawed Plate				
WEIGHT SHIPPED: 3216 LB	QUANTITY: 12 PCS EST.	TRUCK B/L #: 2076118	GAUGE: 0.3750 IN (9.5250 MM)	DIAMETER/WIDTH: 48.500 IN (1231.9 MM)
			LENGTH: 144.500 IN (3670.3 MM)	

MHU 2264264: LOT 284947B9: 12 pieces;

Certified Specifications

AMS 4045/RevL
CMMP 025/RevV

AMS-QQ-A-250/12 RevA

ASTM B 209/Rev14

Test Code: 1512

Lot: 284947B9 Cast 698

Drop 44

Test Results

Ingot 2

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	85.1 : 85.1 (587 : 587)	74.5 : 74.5 (514 : 514)	14.1 : 14.2

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.08	0.18	1.5	0.03	2.4	0.20	5.7	0.03	0.01	0.01	TOT 0.03

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN(wt%)	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

ORDER COMMENTS

AMC CA-15409 R 4





Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108
15000 E Euclid, Spokane Valley WA 99216
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4528433

CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

- * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.
- * All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.
- * was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.
- * has been thermally processed in compliance with AMS 2772, where applicable.
- * is mercury free, within the limits of detection of ASTM E1215 (<1ppm).
- * is in compliance with RoHS 2, European Union Directive 2011/65/EU.
- * is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.
- * is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.
- * is free of weld repair.
- * meets the reporting requirements of EN10204, Type 3.1.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

Michael Peske, PT Lab Process Engineer

SPECIFICATION CONTROL DRAWING

A PURCHASE MATERIAL 7075-T6/T62 (T651 ALUMINUM SHEET OR PLATE)

SPECIFICATION:
QQ-A-250/12 OR AMS-QQ-A-250/12
OR AMS 4045
OR ASTM B209

OR

A PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE

SPECIFICATION:
QQ-A-250/13 OR AMS-QQ-A-250/13
OR AMS 4048 / 4049
OR ASTM B209

A PART NUMBER: M7075T6S | TTT | X | W | WWW |
| THK | | WIDTH |

A WHERE "TTT" = THICKNESS (IN INCHES)
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M7075T6S.063
EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500

A PREFERRED SIZE: .TTT BY 4FT BY 10FT FOR SHEET

RELEASED

2017 JUN 19
ECN 17-574

APPROVED

B	ADD. REF. TO "PLATE", "T651" TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CARB-149)	CP	17 05 05
A	NEW ISSUE	RF	10 11 05
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	BY	DATE
DRAWN	CP		
CHECKED	ML		
MFG. APPR.	LL		
APPROVED	WM		
DE APPR.	DS		
DATE	17 05 05		
DART AEROSPACE LTD HARRISBURG, ONTARIO, CANADA			
DRAWING NO. M7075T6S			
REV. B			
SHEET 1 OF 1			
TITLE 7075-T6 SHEET/PLATE SPEC			
SCALE NTS			
COPYRIGHT © 2013 BY DART AEROSPACE LTD.			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7075T650.375x5.00

PO / BATCH NO.: P0041817/S138106

DATE: 18/12/17

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.375"

QUANTITY RECEIVED: 24.08

THICKNESS RECEIVED: 0.375"

QUANTITY INSPECTED: 24.08

SHEET SIZE ORDERED: -

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y N	AMS QQ-A-250/12
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y N	LT:28494789
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS 61</u>	SIGNED OFF BY: _____		
DATE: <u>18/12/17</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in